

0581913-021501
FOI 913-021501

MAQTQGTRRKVCYYYDGDVGNYYYGQGHMPKPHRIRMTHNLLN
YGLYRKMEIYRPHKANAEEMTKYHSDDYIKFLRSIRPDNMSEYSKQMQRFNVEDCPV
FDGLFEFCQLSTGGSVASAVKLNKQQTDAVNWAGGLHHAKKSEASGFCYVNDIVLAI
LELLKYHQRVLYIDIDIHHGDGVEEAFYTTDRVMTVSFHKYGEYFPGTGDLRDIGAGK
GKYAVNYPLRDGIDDESIEAIFKPVMSKVMEMFQPSAVVLQCGSDSLSGDRLGCFNL
TIKGHAKCVEFVKSFNLPMMLGGGGYTIRNVARCWYETAVALDTEIPNELPYNDYF
EYFGPDFKLHISPSNMTNQNTNEYLEKIKQRLFENLRMLPHAPGVQMQAIPEDAIPEE
SGDEDEDDPKRISICSSDKRIACEEEFSDSEEEGEGGRKNSSNFKKAKRVKTEDEKE
KDPEEKKEVTEEEKTKEEKPEAKGVKEEVKLA (SEQ ID NO:1)

FIGURE 1A

1 atgtctgggg tctctgcccg ctgggtgctgc tgtctccac tcgggtcatcc tgaagacaca
 61 gcctgagcgt ctctgtcact cggggtagac cagcggggga sgcgagcaag atggcgaga
 121 cgcagggcac ccggaggaaa gtctgttact actacgacgg ggatgttga aattactatt
 181 atggacaagg ccaccaatg aagcctcacc gaatccgcat gactcataat ttgttgctca
 241 actatgggtc ctaccgaaaa atggaaatct atcgccctca caaagccaat gctgaggaga
 301 tgaccaagt2 ccacagcgat gactacatta aattcttgcg ctccatccgt ccagataaca
 351 tgcggagta cagcaagcag atgcagagat tcaacgttgg tgaggactgt ccagtattcg
 421 atggcctgtt tgagtctctgt cagttgtcta ctgggtggttc tgtggcaagt gctgtgaaac
 481 ctaataagca gcagacggac atcgctgtga attgggctgg gggcctgcac ctgcaaaaga
 541 agtccgaggc atctggcctc tgttacgtca atgatatcgt ctgggcatc ctggaactgc
 601 taaagtatca ccagagggtg ctgtacattg acattgatat tcaccatggt gacggcgts
 661 aagaggcctt ctacaccacg gaccgggtca tgactgtgtc ctttcataag tatggagagt
 721 acttcccagg aactggggac ctacggggata tcgggggtgg caaaggcaag tattatgctc
 781 ttaactaccc gctccgagac gggattgatg acgagtccta tgaggccatt ttcaagccgg
 841 tcatgtccaa agtaatggag atgttccagc ctagtgcggt ggtcttacag tgtggctcag
 901 actccctatc tggggatcgg ttaggttgc tcaatctaac tatcaaaaga cagccaagt
 961 gtgtggaatt tgtcaagagc cttaacctgc ctatgctgat gctgggaggc ggtgggtaca
 1021 ccattcgtaa cgttgcccgg tgctggacat atgagacagc tgtggccctg gatacggaga
 1081 tccctaataa gcttccatac aatgactact ttgaatactt tggaccagat ttcaagctcc
 1141 acatcagtc tccaatatg actaaccaga acacgaatga gtacctggag aagatcaaac
 1201 agcgactgt tgagaacctt agaatgctgc cgcacgcacc tgggggtccaa atgcaggcga
 1261 ttcttgagga cgccatccct gaggagagtg gcgatgagga cgaagacga cctgacaagc
 1321 gcatctcgat ctgctcctct gacaaacgaa ttgcctgtga ggaagagttc tccgattctg
 1381 aagaggaggg agaggggggc cgcaagaact ctccaactt caaaaagcc aagagagtca
 1441 aaacagagga tgaaaaagag aaagaccag aggagaagaa agaagtcacc gaagaggaga
 1501 aaaccaagga ggagaagcca gaagccaaag gggccaagga ggaggtcaag ttggcctgaa
 1561 tggacctctc cagctctggc ttctctgctga gtccctcacc ttctcttccc c (SEQ ID NO: 2)

FIGURE 1B

0981913-031501
FOI 913-031501

MAYSQGGGKKKVCYYYDGDIGNYYYGQGHMPKPHRIRMTNLLL
NYGLYRKMEIYRPHKATAEEMTKYHSDEYIKFLRSIRPDNMSEYSKQMHIFNVGEDCP
AFDGLFEFCQLSTGGSVAGAVKLNRRQOTDMAVNWAGGLHHAKKYEASGFCYVNDIVLA
ILLELLKYFQRVLYIDIDIHHGDGVVEAFYTTDRVMTVSFHKYGEYFPGTGDLRDIGAG
KGKYYAVNFPMDGIDDESYGQIFKPIISKVMEMYQPSAVVLQCGADSLSGDRIGCFN
LTVKGHAKCVEVVKTENLPLMLGGGGYTIRNVARCWTYETAVALDCEIPNELPYNDY
FEYFGPDFKLHISPSNMTNQNTPEYMEKIKQRLFENLRMLPHAPGVQMQAIPEDAVHE
DSGDEDEDGDPDKRISIRASDKRIACDEEFSDSEDEGEGRNVADHKKGAKKARIEED
KKETEDKKTADVKEEDKSKDNSEKTDTKGKSEQLSNP (SEQ ID NO:3)

FIGURE 2A.

1 cgccgagctt tcggcacctc tgcgggggtgg taccgagcct tcccggcgcc cctcctctc
61 cteccaccgg cctgcccctc cccgcgggac tatcgcccc acgtttccct cagcccttt
121 ctctcccggc cgagccggcg cggcagcagc agcagcagca gcagcaggag gaggagcccc
181 gtggcgggcg tggccgggga gcccattggc tacagtcaag gagcgggcaa aaaaaagtc
241 tgctactact acgacgggtga tattggaaat tattattatg gacaggggtca tcccatgaag
301 cctcatagaa tccgcatgac ccataacttg ctgttaaatc atggccttata cagaaaaatg
361 gaaatatata ggccccataa agccactgcc gaagaaatga caaaatatca cagtgtatgag
421 tatatcaaat ttctacgggc aataagacca gataacatgt ctgagtatag taagcagatg
481 catatatatta atgttggaga agattgtcca gctgttgatg gactctttga gttttgtcag
541 ctctcaactg gcggttcagt tgctggagct gtgaagttaa accgacaaca gactgatatg
601 gctgttaatt gggctggagg attacatcat gctaagaaat acgaagcacc aggtattctgt
661 tacgttaatt atattgtgct tgccatcctt gaattactaa agtatcatca gagagtctta
721 tatattgata tagatattca tcatgggtat ggtgttgaag aagcttttta tacaacagat
781 cgtgtaataa cgggtatcatt ccataaataat ggggaatact ttccctggcag agggacttg
841 agggatattg gtgctggaaa aggcataatc tatgctgtca atttccaat gttgtgatgg
901 atagatgatg agtcatatgg gcagatatct aagcctatta tctcaaagggt gatggagatg
961 tatcaacctc gtgctgtggc attacagtgt ggtgcagact cattatctgg tgatagactg
1021 ggttgtttca atctaacagt caaagggtcat gctaataatg tagaagtgtt aaaaactttt
1081 aacttaccat tactgatgct tggaggagggt gctacacaa tccgtaatgt tgctcgatgt
1141 tggacatatg agactgcagt tggccctgat tgrgagattc ccaatgagtt gccatatat
1201 gattactttg agtatcttgg accagacttc aaactgcata ttagtccttc aaacatgaca
1261 aaccagaaca ctccagaata tatggaaaag ataaaacagc gtttgtttga aaatttgcgc
1321 atgttacctc atgcacctgg tgtccagatg caagctattc cagaagatgc tgttcatgaa
1381 gacagtggag atgaagatgg agaagatcca gacaagagaa tttctattcg agcatcagac
1441 aagcggatag cttgtgatga agaattctca gattctgagg atgaaggaga aggaggtcga
1501 agaaatgtgg ctgatcataa gaaaggagca aagaaagcta gaattgaaga agataagaaa
1561 gaaacagagg acaaaaaaac agacgttaag gaagaagata aatccaaggz caacagtggg
1621 gaaaaaacag ataccaaagg aaccaaatca gaacagctca gcaacccctg aatttgacag
1681 tctcaccaat ttcagaaaat cattaaaaag aaaaatttga aaggaaatg ttttctttt
1741 gaagacttct ggcttcatct tatactactt tggcatggac tttattttat ttcaaatggg
1801 actttttcgt ttttgttttt ctgggcaagc tttattgtga gatttttcaa tcatgaagca
1861 aaattttctt tctccaccat gcttttztgt atagtattta aaatcgatg gagttattat
1921 gtcaaaaaaa ctgatctatt aaagaagtaa ttggcctttc tgagctgaaa aaaaaaaa
1991 aaaa (SEQ ID NO:4)

FIGURE 2B

MAKT VAYFYDPDVGNFHYGAGHPMKPHRLALTHSLVLHYGLYKK
MIVFKPYQASQHDMCRFHSEYIDFLQRVSPTNMQGFTKSLNAFNVGDDCPVFPGLFE
FCSRYTGASLQGATQLNNKICDIANWAGGLHHAKKFEASGFCYVNDIVIGILELLKY
HPRVLYIDIDIHHGDGVQEA FYLTDRVMTVSFHKYGN YFFPGTGD MYEVGAESGRYYC
LNVPLRDGIDDQSYKHLFQPVINQVVD FYQPTCIVLQCGADSLGCDRLGCFNLSIRGH
GECVEYVKSFNIPLLVLGGGGYTVRNVARCWTYETSLLVEEAISEELPYSEYFEYFAP
DFTLHPDVSTRIENQNSRQYLDQIRQTIFENLKMLNHAPSVQIHDV PADLLTYDRTDE
ADAEERGPEENYSRPEAPNEFYDGDHDNDKESDVEI (SEQ ID NO:5)

FIGURE 3A

09817913-031501

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1 ggaattcgcg gccgcggcgg gcgcgggagg tgcggggcct gctccccccc gcaccatggc
61 caagaccgtg gcctatttct acgaccccgga cgtgggcaac ttccactacg gagctggaca
121 ccctatgaag ccccatcgcc tggcattgac ccatagcctg gtcctgcatt acggtctcta
181 taagaagatg atcgtcttca agccatacca ggcctcccaa catgacatgt cccgcttcca
241 ctccgaggac tacattgact tcctgcagag agtcagcccc accaatatgc aaggtctcac
301 caagagtctt aatgccttca acgtaggcga tgactgcccc gtgtttcccg ggtccttga
361 gttctgctcg cgttacacag gcgcattctt gcaaggagca acccagctga acaacaagat
421 ctgtgataat gccattaaat gggctggtgg tctgcaccaa gccaagaagt ttgaggcctc
481 tggcttctgc tatgtcaacg acattgtgat tggcatcctg gagctgctca agtaccaccc
541 tcgggtgctc tacattgaca ttgacatcca ccattggtgac ggggttcaag aagcttctta
601 cctcactgac cgggtcatga cgggtgtcct ccacaaatcc ggaaattact tcttccctgg
661 cacagggtgac atgtatgaag tcggggcaga gagggtggcg tactactgtr gaacgtggc
721 cctgcgggat ggcatgtatg accagagtta caagcacctt tccagcccg actctctggg
781 ggtagtggac ttctaccaac ccacgtgcat tgtgtccag tgtggagctg actctctggg
841 ctgtgatcga ttgggtgctt ttaacctcag catccgaggg catggggaat cgttgaata
901 tgtcaagagc ttcaatatcc ctctactcgt gctgggtggg ggtggttata ctgtccgaaa
961 tgttgcccg cgtgggacat atgagacatc gctgctggta gaagaggcca ttagtgagga
1021 gcttccctat agtgaatact tcgagtactt tgcgccagac ttcacacttc atccagatgt
1081 cagcaccggc atcgagaatc agaactcacg ccagtatctg gaccagatcc gccagacaat
1141 ctttgaaaac ctgaagatgc tgaacctgac acctagtgtc cagattcatg acgtgcctgc
1201 agacctcctg acctatgaca ggactgatga ggctgatgca gaggagaggg gtcctgagga
1261 gaactatagc aggccagagg caccatga gttctatgat ggagaccatg acaatgacaa
1321 ggaaagcgat gtggagattt aagagtggct tgggatgctg tgtcccaagg aatttctttt
1381 cacctcttgg aagggttggg gggaaaaggg gtggctccta ggtcctggg ggtcaccaca
1441 ggggtctttg ctgactctgg gaaagagtct ggagaccaca cttggtctc gaacctcta
1501 cctgctcttc ctctctctcc caaggactga caatggtacc tattagggat gagatacaga
1561 caaggatagc tatctgggac attattggca gtgggcccct gaggcagtcc ctagccccc
1621 ttgcccctta tttcttccct gcttccctcg aaccagaga tttttgagg atgaacgggt
1681 agacaaggac tgagattgcc tctgacttcc tcttccctg ggtcttgacc tcttctctc
1741 ccttgcttcc agggaaagat aagagagaga gatttggaa gggctctgac tccctaacac
1801 ctgaatccca gatgatggga agtatgtttt caagtgtgg gaggatatga aatgttctg
1861 ttctcacttt tggcttctat tccattttac cactgttttt atccaataaa ctaagtcggg
1921 attttttcta cctttgatgg ttttagcgcc gcgc (SEQ ID NO: 6)

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FIGURE 3B

09817913.031601
FOREFEET62T860

MLAMKHQQELLEHQKLERHRQEQELEKQHREQKLQQLNKEKG
KESAVASTEVMKLOEFVLNKKKALAHRLNHCISDPYWGKTQHSSLDQSSPPQS
GVSTSYNHPVLGMYDAKDDFPLRKTASEPNLKLRSRLKQKVAERRSSPLLRRKDGPPV
TALKKRPLDVTDSACSSAPGSGPSSPNSSGSVSAENGIAPAVPSIPAETSLAHLVA
REGSAAPLPLYTSPSLPNITLGLPATGPSAGTAGQDTERLTLPALQQRLSLFPGTHL
TPYLSTSPLERDGGAAHSPLLQHMVLEQPPAQAPLVTGLGALPLHAQSLVGADRVSP
SIHKLRQHRPLGRTQSAPLPQNAQALQHLVIOQQHQFLEKHKQQFQQQQLOMNKIIP
KPSEPARQPESHPEETEEELREHQALLDEPYLDRLPGQKEAHAQAGVQVKQEPYESDE
EEAEPREVEPGQRQPSEQELLFRQQALLLEQQRIHQLRNYQASMEAAGIPVSFGGHR
PLSRAQSSPASATFPVSVQEPPTKPRFTTGLVYDTLMLKHQCTCGSSSSHPEHAGRIQ
SIWSRLQETGLRGKCECIRGRKATLEELQTVHSEAHTLLYGTNPLNRQKLDKLLGS
LASVFVRLPCGGVGVDSDTIWNEVHSAGAARLAVGCVVELVFKVATGELKNGFAVVRP
PGHHAEESTPMGFCYFNSVAVAAKLLQQRLSVSKILIVDWDVHHGNGTQQAFYSDPSV
LYMSLHRYDDGNFFPGSGAPDEVGTGPGVGFNVMMAFTGGLDPPMGDAEYLAAFRTVV
MPIASEFAPDVVLVSSGFDAVEGHPTPLGGYNLSARCFGYLTKQLMGLAGGRIVLAE
GGHDLTAICDASEACVSALLGNELDPLPEKVLQQRPNANAVRSMEKVMETHSKYWRCL
QRTTSTAGRSLIEAQTCENEEAETVTAMASLSVGKPAEKRPDEEPMEEEPPL (SEQ ID NO: 7)

FIGURE 4A

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1 ggagggttgtg gggccgcgcg cgcgaggcac cgtccccgcg gccgcccag cccgagcccc
61 agccccgcga cccgcccgcg ccgcccgcgc cgccccgcga acagcctccc agcctggccc
121 cccggcgggcg ccgtggccgc gtccccgctg tcgcccgcgc agccccgagc cgcgcccgcg
181 cgggtggcgcg cgcaggctga ggagatgcgg cgcgaggcgc cggagcaggg ctgagcccgg
241 ccgcccgcgc ccgcccgcgt aagcgagcc cgccccgcgc gcccgcgggc cattgtccgc
301 cggccgcccc gcgcccgcgc cagcctgcag gccttgggag ccgcggcagg tggacggcgc
361 cggtccacac ccgcccgcgc ggccgcgcgc gccccttctg gacctttcca cccgcgcgcg
421 gtgggacccg ccgcccgcgc ggccggggcg cgggggtggg cagggcaggc agcggcgccg
481 gaggcggcctt cgcccgcgcg gcccggggcg caggttcatc tgcagaagcc agcggagccc
541 tctcccggtg cggggcccgc gcccggggcg caggttcatc tgcagaagcc agcggagccc
601 tctgttcaac ttgtgggtta accgtcccgc tacttgtatg tgggtgggg agtltggggc
661 acgtctgtga cccagccctc gtggaaatct tgagccattt cgaatcactt aaaggagtgg
721 tcgttggagc tatcgtttcc gtggaaatct tgagccattt cgaatcactt aaaggagtgg
781 acattgctag caatgagctc ccaaagccat cacatgccc gacgggtgga tgggtggggc
841 gtggagctgc tgaatcctgc ccctcgga cagatgccc acctgcgcct ggaccaccag
901 gcgctgcctc tgcaagtggc gccggccctg cgggagcagc agctgcagca ggagctcctg
961 ttctcactgc ctgtggcaga gccggccctg cgggagcagc agctgcagca ggagctcctg
1021 gcgctcaagc agaagcagca gatccagagg cagatcctca tcgctgagtt ccagaggcag
1081 cagcagcagc tctcccggca gcacgaggcg cagctccacg agcacatcaa gcaataacag
1141 gagatgctgg ccattgaagca ccagcaggag ctgctggaac accagcggaa gctggagagg
1201 caccgcccag agcaggagct ggagaaagcag caccgggagc agaagctgca gcagctcaag
1261 aacaaggaga agggcaaaaga gaggcgctg gccagcacag aagtgaagat gaagttacaa
1321 gaatttgtcc tcaataaaaa gaagcgctg gccaccggga atctgaacca ctgcatctcc
1381 agcgaccctc gctactggta cgggaaaaac cagcacagtt ccttgacca gaggttctca
1441 cccagagcgc gagggtgcac ctctataaac caccgggtcc tgggaatgta cgcagccaaa
1501 gatgacttcc ctcttaggaa aacagcttct gaaccgaatc tgaattacg gtcaggcta
1561 aagcagaaag tggccgaaag accgagcagc cccctgttac scaggaaaga cgggcccagt
1621 gtcactgtcc taataaagcg tccgttggat gtacagact cccgctgcag cagcggccca
1681 ggctccggac ccagctcacc caacaacagc tccgggagcg tcagcgcgga gaacgggtatc
1741 gcgcccgcgc tccccagcat cccggcgag acaggtttgg cgcacagact tgtggcagca
1801 gaaggctcgg ccgctccact tcccctctac acatcgccat ccttgcccaa catcacgctg
1861 ggccctgcctg ccaccggccc ctctgcgggc acgscggggc agcaggacac cagagactc
1921 acccttcccc cctccagca gaggctctcc cttttccccg gcacccactt cactccctac
1981 ctgagcacct cggcccttga gccgggacgga ggggcagcgc acagccctct tctgcagcac
2041 atggtcttac tggagcagcc accggcacaa gcacccctcg tcacaggcc: gggagcactg
2101 cccctccacg cacagtctct ggttgggtgca gaccgggtg: cccctcccat ccacaagctg
2161 cggcagcacc gcccactggg gcgggacccag tcggccccgc tggcccajaa cggccaggct
2221 ctgcagcacc tggctatcca gcagcagcat cagcagtttc tgggaaaca caagcagcag
2281 ttccagcagc agcaactgca gatgaacaag atcatcccca agccaagcga gccagcccgg
2341 cagcgggaga gccaccggga gggagcggag gaggagctcc gtgagcaca ggcctgtgtg
2401 gacgagccct acctggaccg gctgcccggg cagaaggagg cgcacgcaca ggcggcgctg
2461 caggtgaagc aggagcccat tgagagcgat gaggaaggag cagagccccc acgggaggtg
2521 gagccggggc agcgccagcc cagtgagcag gagctgctct tcagacagca agccctcctg
2581 ctggagcagc agcgatcca ccagctgagg aactaccagg cgtccatgga ggcggcgggc
2641 atccccgtgt ccttcgycgg ccacaggcct ctgtcccggg cgcagctctc acccggtct
2701 gccaccttcc ccgtgtctgt gcaggagccc cccaccaagc cgcagctcac gacaggctc
2761 gtgtatgaca cgtgtatgct gaagcaccag tgcacctgcg gtagtagcag cagccacccc
2821 gagcacgccc ggaggatcca gagcatctgg tcccgccctg agtagacagc cctccggggc
2881 aaatgcgagt gcatccgcgg acgcaaggcc accctggag: agctacagac ggtgactcg
2941 gaagcccaca cctcctgta tggcagaa cccctcacc cccctcacc ggcagaaact ggacagtaag
3001 aaactcctag gctcgtctcc ctccgtgttc cccggcctcc cctcggtgg cctcggtgg ggtgtggggc
3061 gacagtgaac ccattatgaa cgaggtgcac cccggcctcc cccggcctcc cctcggtgg ggtgtggggc
3121 tgcgtggtag agctggtctt caaggtggcc acaggggagc tggcggggg cagcccgctt ggtgtggggc
3181 gtccgcccccc ctggacacca tgcggaggag agcagcccca tgggctttt ctttctcag ctacttcaac
3241 tccgtggccg tggcagcaa gcttctgcag cagaggttga gcttctacag cgttgagcaa gatcctcatc
3301 gtggactggg acgtgcacca tggaaacggg acccagcagg gatgggaact ccttccagag cgttccatagc
3361 gtcctgtaca tgtccctcca ccgtacgac gatgggaact tcttccagag cagcggggct tttaccggc
3421 cctgatgagg tgggacaggg gcccgcgctg tacttggcg ccttccagag cgttccatagc ggttccatagc
3481 ggcctggacc ccccatggg cccggatg: gtcggggg: ccttccagag cgttccatagc ggttccatagc
3541 ccgatcgcca scgagtttgc cccggatg: gtcggggg: ccttccagag cgttccatagc ggttccatagc

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FIGURE 4B (SHEET 1 OF 3)

3601 gagggccacc ccacccctct tggggggctac aacctctccg ccagatgctt cgggtacctg
3661 acgaagcagc tgatgggcct ggctggcggc cggatgtgcc tggccctcga gggaggccac
3721 gacctgaccg ccattttgcga cgccctcgaa gcatgtgttt ctgcccgtct gggaaacgag
3781 cttgatccctc tcccagaaaa ggtttttacag caaagaccga atgcaaacgc tgtccgttcc
3841 atggagaaaa tcatggagat ccacagcaag tactggcgct gcctgcagcg cacaacctcc
3901 acagcggggc gttctctgat cgaggctcag acctgscgaga acgaagaagc cgagacggtc
3961 accgccatgg cctcgctgtc cgtggcgctg aagcccgccg aaaagagacc agatsaggag
4021 cccatggaag aggagccgcc cctgtagcac tccctcgaag ctgctgttct cttgtctgtc
4081 tgtctctgtc ttgaagctca gccaaagaac tttcccggtt caccgctgcg tcccaccgtg
4141 gggctctctt ggagcaccga gggacaccga gcgtgcaaca gccacgggaa gcctttctgc
4201 cggccaggcc cagaggtctc gagacgcaca tgcacgcctg ggcgtggcag cctcacaggg
4261 aacacgggac agacgcgggc gacgcgcaga cacacggaca cgcggagcc aagcacctc
4321 tggcggggtcc cgcaagggac gccgtggaag aacaaatata aaagatctaa taatacaaaa
4381 tgccgaattc agttgacacg aggcacagaa tattaccac aactccacag tctctgtgta
4441 caaacttgat taaaactggg gcttaaagtt tttttcaazg aggacgtttt ctacggctgt
4501 aaccactcga ctcatcttgt agcttatctt tttttcaazg aggacgtttt ctacggctgt
4561 gggccgctc tgtgaacat agcgggtgtg ggcggggggg ctgcacccgg gtgggggaca
4621 gagggacctt taaagaaaac aaaactggac agaaaacagga atgtgagctg ggggagctgg
4681 ctctgagttt tcaaaagcca tgggctgggt ctgaggaaca cctttttttt tattgtcttg
4741 gtggattttt gtggctgggt tttctgaagt ctgaggaaca atgccttaag aaaaacaaa
4801 cagcaggaat cggtgggaca gtttctgtg gccagccgag cctggcagtg cttggcaccg
4861 gagctggcct gacgcctcaa gcacgggcac cagccgtcat ctccggggcc aggggctgca
4921 gcccggcggt cctgtttttg ctttatgtct gtttgaagt aatggagcta gtcccaaaaa
4981 agtggcaaat cccgttggag gtttgaagt ttaacgaat ctaaacgaat ccaaagtgtc
5041 ctcacacgtc acatacgatt gagcatctcc atctggtcgt gaagcatgtg gtaggcacac
5101 ttgcagtgtt acgatcggaa tgccttttat taaaagcaag tagcatgaag tattgcttaa
5161 attctaggta taaataaata tatatatgta taatatatat tccaatgtat tccaagctaa
5221 gaaacttact tgattcttat gaaatcttga taaatatttt ataatgcatt tatagaaaaa
5281 gtatatatat atataaaaa tgaatgcaga ttgcgaaggc ccttgcaaat ggaatggctg
5341 tgaatttgct ctcaagggtg ttatggaaag gcatcctgat tgattgaaat tcatgttttc
5401 tcaagctcca gattggctag atttcagatc gccaacacat tgcgccactg gcaactcccc
5461 tacaagtctg tactttcatt ttaattattt tcaaacagaa ccgctccccg cttcaagcct
5521 tcatgcacat atgtacctaa tgagttttta tagcaaagaa tataaatttg ctgttgattt
5581 ttgtatgaat tttttcacaa aaagatcctg aataatgtc gttttatgaa ttttacattt
5641 tccctcacca tttagcaatt tcttgaatgg taataatgtc taaatctttt tctttctga
5701 attcttgctt gtacattttt ttttaccttt caaaggcttt taattatttt tttttctatt
5761 tttgtacgat gagtrttctg cagcgtacag aattggttgc gtcagattct attttcagaa
5821 agtgagagga gggaccgtag gtcttttccg agtgacacca acgatttgtt ctttccctgg
5881 ctgtccctagg agctgtataa agaagcccag gggctctttt taactttcaa cactagtagt
5941 attacgaggg gtgggtgtgt tttccctccc gteggcaagg cagggagggg tgccttaggat
6001 gcccggccac cctggggagg ttgccagatg ccggggggcag tcagcattza tgaactcat
6061 gtttaaaact ctctgaccac atcgtcagga tagaattcta acttgagttt tccaagacc
6121 tttctgagcat gtcagcaatg catggggcac acgtggggct ctttaccac tgggtcttt
6181 cactgcagc cactggcca gccctggatt ttggagcctg tggctgcaag gaacccaggg
6241 acccttggtg cctgttgaac ctgcaggag ggtatgattg cctgaccagg acagccagtc
6301 ttactctttt ttctcttcaa czgtaactga cagtcacgtt ttactggtaa cttattttcc
6361 agcacatgaa gccaccagtt tcatccaaaa gtgtatatg ggttcagact tgggggcaga
6421 agttcagaca caccgtgtct aggagggacc cagagccgag ttttgaccaa ttccggagt
6481 tacagggtag cttctgaaat taactcaaac ctctgagaca gttgtttgag agcaggcaga
6541 tcaacttggt actgggctgc tgatggctcag ccctgggtgc cactcttttc tctgaagccc
6601 acggtcttgg gacttgrttg actttccctt cctgggtgga cagagcagtg acagggccc
6661 agattggcaa gaggagctgg tccattcccc attcatggca cagagccctt ggggatccct
6721 cctagcaggc tcttctggcc tccctggcct catctctctg tgcatacct cacttttttt
6781 ccacctgccc tcttaccctg ccgtggctta tggggaggaa caggttatca gtggggggac
6841 ttttaagcag atgatgggt aacatggact gctcagtgga caggttatca gtggggggac
6901 ttaattctaa tctcattcaa atggagacg cctctgcaaa ggcctggcag gggggggcac
6961 gtttcatctg tcagctcact ccagcttcac aatgtgtctg agagcattac tctgtagccc
7021 tttcttggaa gacacactcg gctcttctcc acagcaagcg tccagggcag atggcagagg
7081 atctgcctcg gcgtctgcag gcgggaccac gtcagggagg gttccttcac gtgttctccc
7141 cgtgggtcct tggaccttta gcccttttct tcttttgcaa aggccttggg ggcactgggt
7201 gggagttagc aagcgagcac tttatatccc tttgagggaa accctgatga cccactggg
7261 cctcttgagg cctgcgctgc cctgcgctgc tcccgcgctg ccgcagcgtg cccacgtgac

FIGURE 4B (SHEET 2 OF 3)

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7321 cagcggccac cagcaggcgg ctgtcccggg ggccgtggcc cgtggggact ggccggccct
7381 cccagcgctc ccagggtctt ggttctggag ggccactttg tcaagggtgt tcagtttttc
7441 ttactttctt ttgaaaatct gtttgcaagg ggaaggacca ttctgtaatg gtctgacaca
7501 aaagcaagtt tgatttttgc agcactagca atggactttg ttgtttttct ttctgatcag
7561 aacattcctt ctttactggg cacagccacg tgctcattcc atcttctctt ttgtagactt
7621 tgggcccacg tgttttatgg gcattgatac atatataaat atatagatat aatatatat
7681 gaatatattt ttttaagtgt cctacacctg gaggttgcat ggactgtacg accggcatga
7741 ctttataatt tttacagatt ttgcacgcca aactcggcag ctttggggaa gaagaaaaat
7801 gcctttctgt tcccctctca tgacatttgc agatacaaaa gatggaaatt tttctgtaaa
7861 acaaaacctt gaaggagagg agggcgggga agtttgctgc ttattgaact tattcttaag
7921 aaattgtact ttttattgta agaaaaataa aaaggactac ttaaacattt gtcatattaa
7981 gaaaaaaaagt ttatctagca ctgtgtgcat accaataata gagtttattg tattttatgt
8041 gaaacagtgt tttagggaat ctactcagaa ttcacagtga actgcctgtc tctctcgagt
8101 tgatttggag gaattttgtt ttgtttttgt ttgtttgttt ccttttatct ccttccacgg
8161 gccaggcgag cgccgcccgc cctcactggc ctgtgtgacg tttattctga ttgagaactg
8221 ggcggactcg aaagagtcct cttttccgca cagctgtgtt gactttttta ttacttttag
8281 gtgatgtatg gctaagattt cactttaagg agtcgtgaac tgtgcgagca ctgtgggtta
8341 caattatact ttgcatcgaa agsaaaccat ttcttcattg taacgzagct gagcgtgttc
8401 ttagctcggc ctcacttltg ctctggcatt gattaaaagt ctgctattga aagaaaaag

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(SEQ ID NO: 8)

FIGURE 4B (SHEET 3 OF 3)

0981791.01601

LRQGGTLTGKFMSTSSIPGCLLGVALEGDGSPHGHASLLQHVL
LEQARQQSTLIAVPLHGQSPLVTGERVATSMRTVGKLPRHRPLSRTQSSPLPQSPQAL
QQLVMQQQHQQFLEKQKQQQLQLGKILTKTGELPRQPTTHPEETEEELTEQQEVLLGE
GALTMPREGSTESESTQEDLEEEDEEEDGEEEDCIQVKDEEGESGAEEGPDLEEPGA
GYKKLFSDAQPLQPLQVYQAPLSLATVPHQALGRTQSSPAAPGGMKSPPDQPVKHLFT
TGVVYDTFMLKHQCMCGNTHVHPEHAGRIQSIWSRLQETGLLSKCERIRGRKATLDEI
QTVHSEYHTLLYGTSPNLRQKLDKLLGPISQKMYAVLPCGGIGVDSDTVWNEHSS
SAVRMAVGCLLELAFKVAAGELKNGFAIIRPPGHAEESTAMGFCFFNSVAITAKLLQ
QKLVNGKVLIVDWDIHHGNGTQQAFYNDPSVLYISLHRYDNGNFFPGSGAPEEVGGGP
GVGYNVNVAWTGGVDPPIGDVEYLTAFTVVMPIAHEFSPDVVLVSAGFDAVEGHLSP
LGGYSVTARCFGHLTRQLMTLAGGRVVLALGEGHDLTAICDASEACVSALLSVELQPL
DEAVLQQKPNINAVATLEKVIETQSKHWSCVQKFAAGLGRSLREAQAGETEEAETVSA
MALLSVGAEEQAQAAAAREHSRPAEEPMEQEPAL (SEQ ID: NO: 9)

FIGURE 5A

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1  ccctgcgcca ggggtggcacg ctgaccggca agttcatgag cacatcctct attcctggct
61  gcctgctggg cgtggcactg gagggcgacg ggagccccc cgggcatgcc cccctgctgc
121  agcatgtgct gttgctggag caggcccggc agcagagcac cctcatcgct gtgccactcc
181  acgggcagtc cccactagtg acgggtgaac gtgtggccac cagcatgcgg acggtaggca
241  agctcccgcg gcatcgcccc ctgagccgca ctacgtcctc accgctgccc cagagtcccc
301  aggccctgca gcagctggtc atgcaacaac agcaccagca gtccctggag aagcagaagc
361  agcagcagct acagctgggc aagatcctca ccaagacagg gaagctgccc aggcagcccc
421  ccaccacccc tgaggagaca gaggaggagc tgacggagca gcaggaggcc ttgctggggg
481  agggagccct gaccatgccc cgggagggct ccacagagag tgagagcaca caggaagacc
541  tggaggagga ggacgaggaa gaggatgggg aggaggagga gsatcgcatc caggttaagg
601  acgaggaggg cgagagtggg gctgaggagg gggccgactt ggaggagcct ggtgctggat
661  acaaaaaact gttctcagat gcccagccgc tgcagccttt gcagggtgac caggcgcccc
721  tcagcctggc cactgtgccc caccaggccc tgggcccgtac ccagtcctcc cctgctgccc
781  ctgggggcat gaagagcccc ccagaccagc ccgtcaagca cctcttcacc acaggtgtgg
841  tctacgacac gttcatgcta aagcaccagc gcatgtgcgg gaacacacac gtgcaccctg
901  agcatgtctg ccggatccag agcatctggg cccggctgca ggagacaggc ctgcttagca
961  agtgcgagcg gatccgaggt cgcaaagcca cgctagatga gatccagaca gtgcaactctg
1021  aataccacac cctgctctat gggaccagtc cctcaaccg gcagaagcta gacagcaaga
1081  agttgtctcg ccccatcagc cagaagatgt atgctgtgct gccttgtggg ggcacgggg
1141  tggacagtga caccgrgtgg aatgagatgc actcctccag tgctgtgccc atggcagtg
1201  gctgcctgct ggagctggcc ttcaagggtg ctgcaggaga gctcaagaat ggatttgcca
1261  tcatccggcc cccaggacac cacgccgagg aatccacagc catgggattc tgcttcttca
1321  actctgtagc catcaccgca zaactcctac agcagaagtt gaacgtgggc aaggtcctca
1381  tcgtggactg ggacattcac catggcaatg gcacccagca ggcgttctat aatgacccct
1441  ctgtgctcta catctctctg catcgctatg acaacgggaa cttctttcca ggctctgggg
1501  ctctgaaga ggttgggtga ggaccaggcg tgggtacaa tgtgaacgtg gcatggacas
1561  gaggtgtgga ccccccat tggagacgtg agtaccttac agccttcagg acagtgtga
1621  tgcccatgca ccacagattc tcacctgatg tggctcctag ctccgcccgg ttgatgtg
1681  ttgaaggaca tctgtctcct ctgggtgggt actctgtcac cgccagatgt ttggccact
1741  tgaccaggca gctgatgacc ctggcagggg gcccgggtgg gctggccctg gaggggaggc
1801  atgacttgac cgccatctgt gatgcctctg aggcctgtgt ctcggctctg ctcagtgtag
1861  agctgcagcc cttggatgag gcagtcctgc agcaaaagcc caacatcaac gcagtggcca
1921  cgctagagaa agtcatcgag atccagagca aacactggag ctgtgtgca gatttcggc
1981  ctgggtctgg cgggtccctg cgagaggccc aagcaggtga gaccgaggag gccgagactg
2041  tgagcgccat ggctctgctg tgggtggggg ccgagcaggc ccagcctgag gcagcccggg
2101  aacacagccc caggccggca gaggagccca tggagcagga gctgcccctg tgacgccccg
2161  gccccatcc ctctgggctt caccattgtg attttgttta tttttctat taaaaaaaa
2221  aagtcacaca ttc (SEQ ID NO:10)

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FIGURE 5B

1 mtstgqdstt trqrrsrqnp qspqddsvt skrnikkav prsipnlaev kkkgkmkklg
61 qameedlivg lqgmdlnlea ealagtglvl deqlnefhcl wddspegpe rlhaiekeqli
121 qeglldrcvs fqarfaekke lmlvhsleyi dlmettqymn egelrvladv ydsvyhpnps
181 yscacclasgs vlrlvdavlg aeirngmaii rppghhaqhs lmdgycmfhn vavaaryaqq
241 khrrrvliv dwdvhhgqgt qftfdqpsv lyfsihryeq grfwphlkas nwtstgfgqg
301 qgytinvpwn qvgmrdadyi aafihvllpv alefqpqlvl vaagfdalqg dpkgemaatp
361 agfaqlthll mglaggklil sleggynlra laegvsaslh tllgdpcpml espgapcrsa
421 qasvscalea lepfwevlvr stetverdnm eednveesee egpweppvlp iltwpvlqsr
481 tglvydqnmm nhcnlwdshh pevpqrilri mcrleelgla grcltltprp atealltch
541 saeyvghlra tekmtrelh ressnfdisy icpstfacaq latgaacriv eavlsgevl
601 gaavvrppgh haeqdaacgf cffnsavaa rhaqtisgha lrilivdwdv hhngtqhmf
661 eddpsvlyvs lhrydhgtff pmgdegassq igraagtgt vnvawngprm gdadylaawh
721 rlvpiayef npelvlvsag fdaargdplg gcqvspgya hlthllmgl sgrilileg
781 gynltsises maactrllg dppplltpr pplsgalasi tetiqvhrry wrslrmkve
841 dregpssskl vtktapqak prlaermtr ekkvleagmg kvtsasfgee stpgqtnset
901 avvaltqdqp seatggatl aqtiseaaig gamlgqttse eavggatpdq ttseetvgga
961 ildqttseda vggatlgqtt seeavggatl aqtiseaame gatldqttse eapggatliq
1021 tplasstdhq tpptspvqgt tpqispstli gslrtlelgs esqgasesqa pgeenllgea
1081 agqqdmadsm lmqgsrgltd qaifyavtvl pwcphlvavc pipaagldvt qpcgdcgtiq
1141 enwvclscyq vycgryingh mlqhhgnsgh plvlsyidls awcyycqayv hhqalldvkn
1201 iahqnkfged mphph (SEQ ID NO:11)

FIGURE 6A

1 gggcagtccc ctgaggagcg gggctgggtg aaacgctagg ggcgggatct ggcggagtgg
 61 aagaaccgcg gcagggggcca agcctcctca actatgacct caaccggcca ggattccacc
 121 acaaccaggc agcgaagaag taggcagaac cccagtcgc cccctcagga ctccagtgtc
 181 acttcaagc gaaatattaa aaagggagcc gtccccgct ctatcccaa tctagcggag
 241 gtaaagaaga aaggcaaat gaagaagctc ggccaagcaa tggaagaaga cctaatactg
 301 ggactgcaag ggatggatct gaaccttgag gctgaagcac tggctggcac tggcttggg
 361 ttgatgagc agttaaatga attccattgc ctctgggatg acagcttccc ggaaggccct
 421 gagcggctcc atgccatcaa ggagcaactg atccaggagg gcctcctaga tcgctgcgtg
 481 tctttcagg cccggtttgc tgaagaggaa gagctgatgt tggttcacag cctagaatat
 541 attgatctga tggaacaac ccagtacatg aatgaggagg aactccgtgt ctagcagac
 601 acctacgact cagtttatct gcacccaac tcatactcct gtgcctgcct ggccctcaggc
 661 tctgtcctca ggctgggtga tgcggctcctg ggggctgaga tccggaatgg catggccatc
 721 attaggcctc ctggacatca cggccagcac agtcttatgg atggctattg catgttcaac
 781 cacgtggctg tggcagcccg ctatgctcaa cagaaacacc gcacccggag ggtccttacc
 841 gtagattggg atgtgcacca cggtaagga acacagtcca ccttcgacca ggacccagct
 901 gtctctatt tctccatcca ccgctacgag cagggtaggt tctggcccca cctgaaggcc
 961 tctaactggt ccaccacagg ttccggccaa ggccaaggat ataccatcaa tgtgccttgg
 1021 aaccagggtg ggatgcggga tgcctactac attgctgctt tctgcacgt cctgctgcca
 1081 gtccctcctg agttccagcc tcagctgggc ctggtggctg ctggatttga tgcctgcaa
 1141 ggggacccca agggtagat ggccgccact ccggcagggt tcgccagct aaccacatg
 1201 ctatgggic tggcaggagg caagctgac ctgtctctgg agggtaggta caacctccg
 1261 gccctggctg aaggcgctag tcttcgctc cacacccttc tgggagacc ttgcccatg
 1321 ctggagtca ctgggtcccc ctgccggagt gccaggctt cagtttctg tgcctggaa
 1381 gcccttgagc ccttctggga gggtcttctg agatcaactg agaccgtgga gagggacaac
 1441 atggaggagg acaatgtaga ggagagcgag gaggaaggac cctgggagcc cctgtgctc
 1501 ccaatctga catggccagt gctacagtct cgcacagggc tggctatga ccaaatatg
 1561 atgaatcact gcaacttggt ggacagccac caccctgagg taccacagcg catcttgcg
 1621 atcatgtcc gtctggagga gctgggcctt gccgggcgt gcctcacct gacaccgcg
 1681 cctgccacag aggtgagct gctcacctgt cacagtgtg agtacgtggg tcatctccg
 1741 gccacagaga aaatgaaac ccgggagctg caccgtgaga gtccaactt tgactcacc
 1801 tatactgcc ccagtacctt ccctgtgca cagcttgcca ctggcgctgc ctgccgctg
 1861 gtggaggctg tgcctcagg agaggttctg aatggtgctg ctgtgtgctg tccccagga
 1921 caccacgcag agcaggatgc agctgcgggt ttgtcttt tcaactctgt ggctgtggct
 1981 gctgccatg cccagactat cagtgggcat gccctacgga tctgattgt ggattgggat
 2041 gtccaccacg gtaatggaac tcagcacatg ttgaggatg acccaggtgt gctatatgt
 2101 tccctgcacc gctatgatca tggcaccttc tccccatgg gggatgaggg tgccagcagc
 2161 cagatcgcc gggctgcggg cacaggcttc accgtcaac tggcatgga cgggccccgc
 2221 atgggtgatg ctgactacct agctgcctgg catgcctgg tcttccat tgcctacgag
 2281 ttaaccag aactgggtgt ggtctcagct ggctttgatg ctgcacgggg ggatccgctg
 2341 gggggctgcc aggtgtcacc tgagggttat gccacctca cccacctgt gatgggcctt
 2401 gccagtggc gattatcct tatctagag ggtggctata acctgacac catctcagag
 2461 tccatggctg cctgcactgc ctccctcctt ggagaccac caccctgtg gaccctgcca
 2521 cggccccac tatcaggggc cctggcctca atcactgaga ccatccaagt ccatgcaga
 2581 tactggcgca gttacgggt catgaaggta gaagacagag aaggaccctc cagtctaag

Figure 6B (sheet 1 of 2)

2641 ttggtcacca agaaggcacc ccaaccagcc aaacctaggt tagctgagcg gatgaccaca
 2701 cgagaaaaga aggttctgga agcaggcatg gggaaagtca cctcggcac atttggggaa
 2761 gagtccactc caggccagac taactcagag acagctgtgg tggccctcac tcaggaccag
 2821 ccctcagagg cagccacagg gggagccact ctggcccaga ccatttctga ggcagccatt
 2881 gggggagcca tgctgggcca gaccacctca gaggaggctg tcgggggagc cactccggac
 2941 cagaccacct cagaggagac tgtgggagga gccattctgg accagaccac ctcagaggat
 3001 gctgttgggg gagccacgct gggccagact acctcagagg aggtcttagg aggagctaca
 3061 ctggcccaga ccatctcgga ggcagccatg gagggagcca cactggacca gactacgtca
 3121 gaggaggctc cagggggcac cgagctgac caaactcctc tagcctcgag cacagaccac
 3181 cagaccccc caacctcacc tgtcaggga actacacccc agatatctcc cagtacactg
 3241 attgggagtc tcaggacctt ggagctaggc agcgaatctc agggggcctc agaatctcag
 3301 gccccaggag aggagaacct actaggagag gcagctggag gtcaggacat ggctgattcg
 3361 atgctgatgc agggatctag gggcctcact gatcaggcca tattttatgc tgtgacacca
 3421 ctgccctggt gtccccattt ggtggcagta tgccccatac ctgcagcagg cctagacgtg
 3481 acccaacctt gtggggactg tggacaatc caagagaatt ggggtgtct ctcttgctat
 3541 caggcttact gtggtcgtta catcaatggc cacatgctcc aacacatgg aaattctgga
 3601 caccgcgtgg tctcagcta catgacctg tcagcctggt gtactactg tcaggcctat
 3661 gtccaccacc aggtctcctt agatgtgaag aacatgccc accagaacaa gtttggggag
 3721 gatatgcccc acccaccta agcccagaa tacggctcct ctacacctc tgaggccac
 3781 gatagaccag ctgtagctca ttccagcctg taccttggat gaggggtagc ctccactgc
 3841 atcccatcct gaatacctt tgcaactccc caagagtgt tattaagtg ttaatactt
 3901 taagagaact ggcacgatta attgtggatc tccccctgcc cattgcctgc ttgaggggca
 3961 ccactactcc agcccagaag gaaagggggg cagctcagtg gcccgaagag ggagctgata
 4021 tcatgaggat aacattggcg ggaggggagt taactggcag gcatggcaag gttgcatatg
 4081 taataaagta caagctgtt (SEQ ID NO. 12)

FIGURE 6B
(Sheet 2 of 2)

1 mdlrvqgrpp vepppeptll alqrpqrllh hlflaglqqq rsvepmrlsm dtpmpelqvg
61 ppeqelrqll hkdkskrsav assvvkqkla evilkqqaa lertvhpnsip gipyrtlepl
121 etegatrsmi ssflppvpsl psdppehfpl rktvsepnk lrykpkksle rknpllrke
181 sappslrrp aetlgdssps ssstpasgcs spndsehgpn pilgdsdrrt hptlgprgpi
241 lgsphtplfl phglepeagg tlpstlqpil lldpsgshap lltvpglgpl pfhfaqlmt
301 terlsqslh wplsrtsep lppsatappp pgpmqprleq lkthvqvkr sakpsekprl
361 rqpisaedle tdgggpgqv ddglehrelg hgqpeargpa plqqhpqvl weqqrlagrl
421 prgstgdtvl lplaqgghrp lsraqsspaa paslsapepa sqarvlssse tpartlpft
481 gliydsvmlk hqcscgdnr hpehagriqs iwsrlqergl rsqceclgr kasleelqsv
541 hserhvllyg tnplsrlkld ngklagllaq rmfemlpcgg vgvdtdtiwn elhssnaarw
601 aagsvtdlaf kvasrelkng favvrppghh adhstamgfc ffnsvaiacr qlqqqskask
661 askilivdwd vhhngtqqt fyqdpvlyi slhrhddgnf fpgsgavdev gagsgegfnv
721 nvawagglp pmgdpeylaa frivvmpiar efspdlvls agfdaaeghp aplggyhvsa
781 kcfgymtqql mnlaggavvl alegghdita icdaseacva allgnrvdpl seegwkqkpq
841 pqchplsgr dpgaq (SEQ ID No: 13)

FIGURE 7A

1 ataataccta ccttgcagga ccacgacagg attaagtgag gaaaaacccc catgagagtg
 61 ttttgcatt gtcaagtgag cctgagggag gctgaggggg gatcaggctg tatcatgccc
 121 ccgaggacaa actttccagt ttaccctgct cctctctct gtccttaggc tgccccaggc
 181 cctgtgcaga cacaccaggc cctcagccgc agcccatgga cctgcgggtg ggccagcggc
 241 cccagtgga gccccacca gagcccatat tgcctggcct gcagcgtccc cagcgctgc
 301 accaccacct ctcttagca ggctgcagc agcagcgctc ggtggagccc atgaggctct
 361 ccatggacac gccgatgccc gagttgcagg tgggaccca ggaacaagag ctgcggcagc
 421 ttctccaaa ggacaagagc aagcgaagtg ctgtagccag cagcgtggtc aagcagaagc
 481 tagcggaggt gattctgaaa aaacagcagg cggccctaga aagaacagtc catccaaca
 541 gccccggcat tcctacaga acctggagc cctggagac ggaaggagcc acccgctcca
 601 tgctcagcag cttttgcct cctgttcca gcctgccag tgaccccca gagcattcc
 661 ctctgcgaa gacagtctct gagcccaacc tgaagtgcg ctataagccc aagaagtccc
 721 tggagcggag gaagaatcca ctgtccgaa aggagagtgc gccccccagc ctccggcggc
 781 ggcccgaga gacctcgga gactcctccc caagtagtag cagcacgccc gcatcagggt
 841 gcagctccc caatgacagc gagcacggcc ccaatccat cctgggcgac agtgaccgca
 901 ggacccatcc gactctgggc cctcgggggc caatcctggg gagccccac actccctct
 961 tctgcccc tggcttgag cccgaggctg ggggcacctt gcctctcgc ctgcagcca
 1021 ttctctct ggacccca ggtctcatg ccccgctgct gactgtccc gggcttgggc
 1081 ccttgccctt ccatttgcc cagtcttaa tgaccaccga gcggctctct gggtcaggcc
 1141 tccactggcc actgagccgg actcgtcag agccctgcc cccagtgcc accgctccc
 1201 caccgccggg ccccatgcag cccgcctgg agcagctcaa aactcacgtc caggtgatca
 1261 agaggtcagc caagccgagt gagaagcccc ggctgcggca gataccctcg gctgaagacc
 1321 tggagacaga tggcggggga ccgggccagg tggtagcga tggcctggag cacagggagc
 1381 tgggcatagg gcagcctgag gccagaggcc ccgctcctct ccagcagcac cctcagggtg
 1441 tgctctggga acagcagcga ctggctgggc ggctccccg gggcagcacc ggggacactg
 1501 tgctgcttc tctggcccag ggtgggcacc ggctctgtc ccgggctcag tctccccag
 1561 ccgcacctgc ctactgta gcccagagc ctgccagcca ggccgagtc ctctccagct
 1621 cagagacccc tgccaggacc ctgccctta ccacagggt gatctatgac tgggtatgc
 1681 tgaagacca gtgtcctgc ggtgacaaca gcaggcacc ggagcacgcc ggccgcatcc
 1741 agagcatctg gtcccgctg caggagcggg ggctccggag ccagtgtgag tgtctccgag
 1801 gccggaaggc ctccctgga gagctgcagt cggctccact tgagcggcac gtgtcctct
 1861 acggcaccaa ccgctcagc cgcctcaaac tggacaacgg gaagctggca gggctcctgg
 1921 cacagcggat gtttagatg ctgccctgtg gtggggttgg ggtggact gacaccatct
 1981 ggaatgagct tcattctcc aatgcagccc gctgggccc tggcagtgtc actgacctg
 2041 ccttcaaagt ggcttctct gagctaaaga atggttctg tgtgtgcgg cccccaggac
 2101 accatgcaga tcattcaaca gccatgggt tctgctctt caactcagt gccatgcct
 2161 gccggcagct gcaacagcag agcaaggcca gcaaggccag caagatctc attgtagact
 2221 gggacgtgca ccatggcaac ggacccagc aaaccttcta ccaagacccc agtgtctct
 2281 acatctcct gcacgccat gacgacggca acttcttccc ggggagtggg gctgtggatg
 2341 aggtaggggc tggcagcggg gagggcttca atgcaatgt ggctgggct ggaggtctgg
 2401 acccccccat gggggatcct gactacctgg ctgcttctag gatagctgt atgcccacg
 2461 cccgagagtt ctctccagac ctatgctgg tgtctgctgg attgatgct gctgagggtc
 2521 accgggccc actgggtggc taccatgttt ctgccaatg ttttgatac atgacgcagc
 2581 aactgatga cctggcagga ggcgcagtgg tctggcctt ggagggtggc catgacctca

Figure 7A (sheet 1/2)

2641 cagccatctg tgacgcctct gaggcctgtg tggctgctct tctgggtaac aggggtggatc
 2701 ccctttcaga agaaggctgg aaacagaaac cccaacctca atgccatccg ctctctggag
 2761 gccgtgatcc ggggtgcacag taaatactgg ggctgcatgc agcgcctggc ctctgtcca
 2821 gactcctggg tgcctagagt gccaggggct gacaaagaag aagtggaggc agtgaccgca
 2881 ctggcgtccc tctctgtggg catcctggct gaagataggc cctcggagca gctgggtggag
 2941 gaggaagaac ctatgaatct ctaaggctct ggaaccatct gcccgccac catgcccttg
 3001 ggacctggtt ctcttctaac ccctggcaat agccccatt cctgggtctt tagagatcct
 3061 gtgggcaagt agttggaacc agagaacagc ctgcctgctt tgacagtat cccagggagc
 3121 gtgagaaaat c (SEQ ID No: 14)

FIGURE 7B
 (sheet 2/2)

1 meepeepads gqslvpvyiy speyvsmcde lakipkrasm vhslicayal hkqmrivkpk
61 vasmematf htdaylqhlq kvsqegdddh pdsieyglgy dcpategifd yaaaiggati
121 taaqlidgm ckvainwsgg whhakkdeas gfcylndavl gilrlrkfe rilyvdlldh
181 hgdgvedafs ftskvmtvsl hkfspgffpg tgdvsdvlg kgryysvnp iqdgideky
241 yqicesvlke vyqafnpkav vlqlgadtia gdpmcsfnmt pvgigklky ilqwqlatli
301 lggggynlan tarcwtyltg vilgktsse ipdhefftay gpdyleitp scrpdrneph
361 riqqilnyik gnlkhvv (SEQ ID NO:15)

FIGURE 8A

1 gaaattcggc acgagctcgt gccgaattcg gcacgagaac ggttttaagc ggaagatgga
 61 ggagccggag gaaccggcgg acagtgggca gtcgctggc ccggtttata tctatagtc
 121 cgagtatgtc agtatgtgtg actccctggc caagatcccc aaacgggcca gtatggtgca
 181 ttctttgatt gaagcatatg cactgcataa gcaaatgagg atagttaagc ctaaagtggc
 241 ctccatggag gagatggcca cctccacac tgatgcttat ctgcagcatc tccagaaggt
 301 cagccaagag ggcgatgatg atcatccgga ctccatagaa tatgggctag gttatgactg
 361 cccagccact gaagggatat ttgactatgc agcagctata ggaggggcta cgtacacagc
 421 tgcccaatgc ctgattgacg gaatgtgcaa agtagcaatt aactggctg gaggggtggca
 481 tcatgcaaag aaagatgaag catctggttt ttgtatctc aatgatctg tcctgggaat
 541 attacgattg cgacggaaat ttgagcgtat tctctacgtg gatttggatc tgcacatgg
 601 agatggtgta gaagacgcat tcagttcac ctccaaagtc atgaccgtgt ccctgcacaa
 661 attcctccca ggattttcc caggaacagg tgacgtgtct gatgttggcc tagggaaggg
 721 acggtactac agtgtaaatg tgcccatca ggatggcata caagatgaaa aatattacca
 781 gatctgtgaa agtgactaa aggaagtata ccaagccttt aatcccaaag cagtggctt
 841 acagctggga gctgacacaa tagctgggga tccatgtgc tctttaaca tgactccagt
 901 ggggaattggc aagtgtctta agtacatcct tcaatggcag ttggcaacac tcattttggg
 961 aggaggaggc tataaccttg ccaacacggc tcgatgctgg acatactga ccgggggtcat
 1021 cctagggaaa acactatcct ctgagatccc agatcatgag ttttcacag catatgggtc
 1081 tgattatgtg ctggaaatca cgccaagctg ccggccagac cgcaatgagc cccaccgaat
 1141 ccaacaaate ctcaactaca tcaaaggga tctgaagcat gtggtctagt tgacagaaag
 1201 agatcaggtt tccagagctg aggagtgggtg cctataatga agacagcgtg tttatgcaag
 1261 cagtttggg aatttgtgac tgcagggaaa atttgaaga aattacttcc tgaattttc
 1321 caaggggcat caagtggcag ctggcttctt ggggtgaaga ggcaggcacc ccagagtcct
 1381 caactggacc taggggaaga aggagatata ccacatttaa agttcttatt taaaaaaca
 1441 cacacacaca aatgaaattt ttaattttt aaaattattt ttaagcgaat tggggagggg
 1501 agtattttaa tcactttaaa tgaaacagat cagaagctgg atgagagcag tcaccagtt
 1561 gtagggcagg aggcagctga caggcagggn tngggcctn ggaccancca ngtggagccc
 1621 tgggagagan ggtactgatc ngcagactgg gagg (SEQ ID NO:16)

FIGURE 8B

Figure 9A

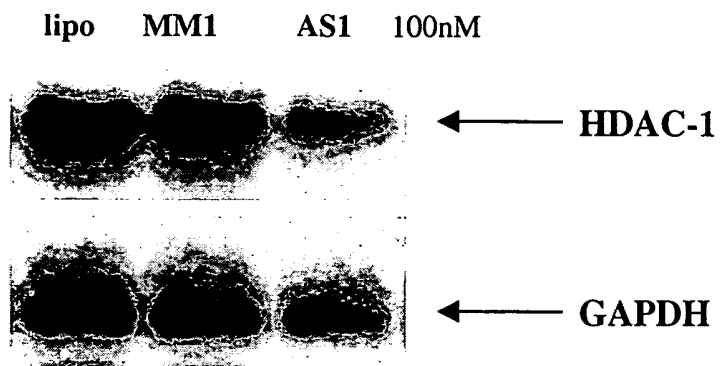


Figure 9B

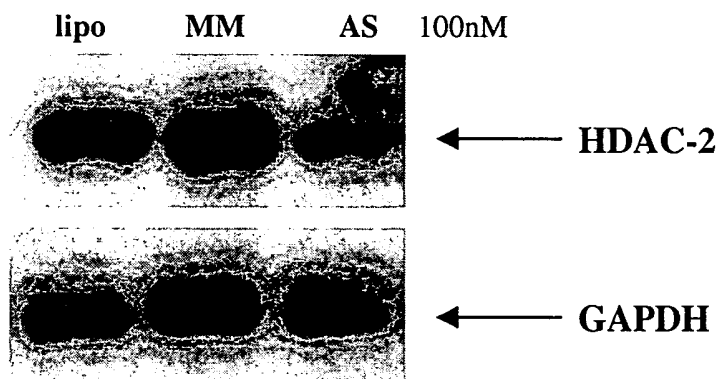


Figure 9C

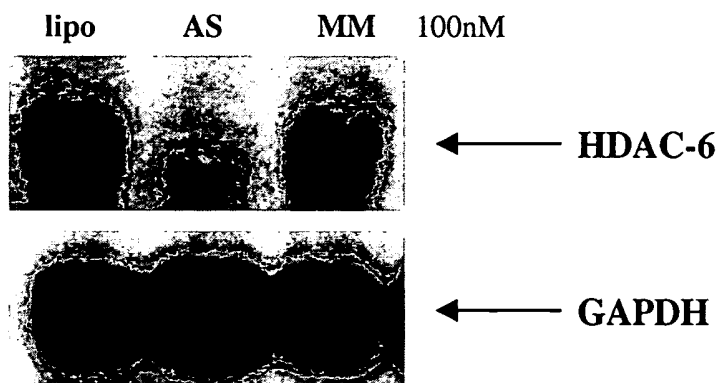


Figure 9 D

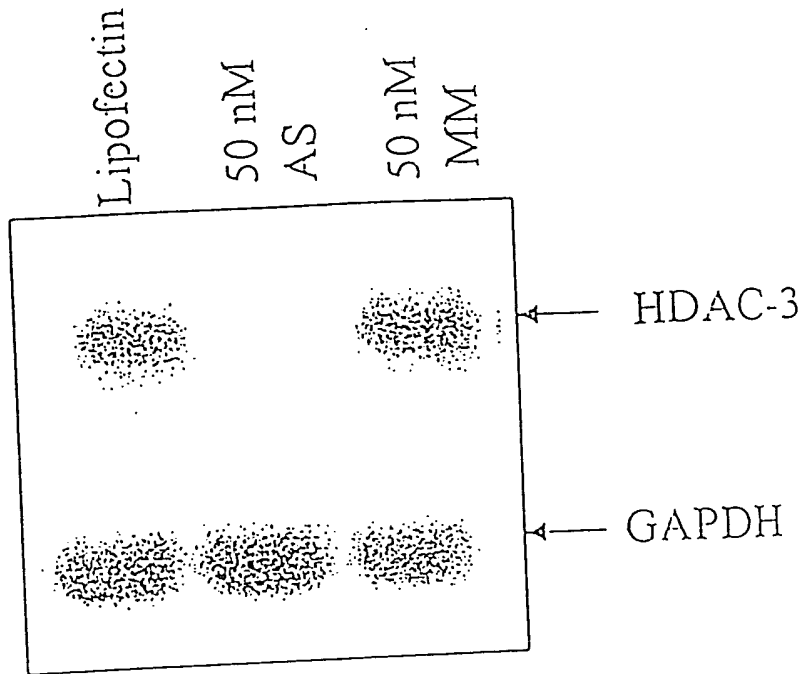


Figure 9 E

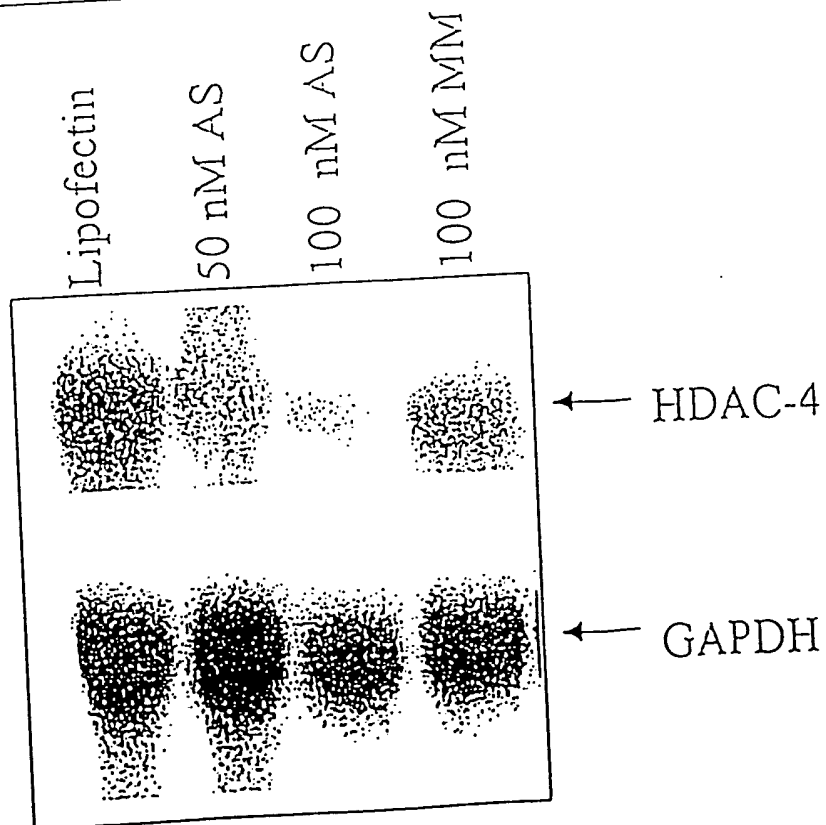


FIGURE 9 F

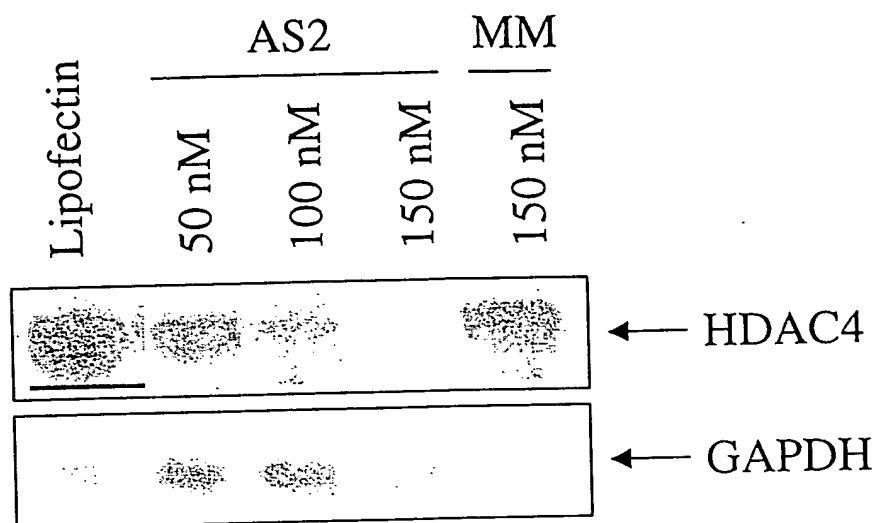


FIGURE 9 G

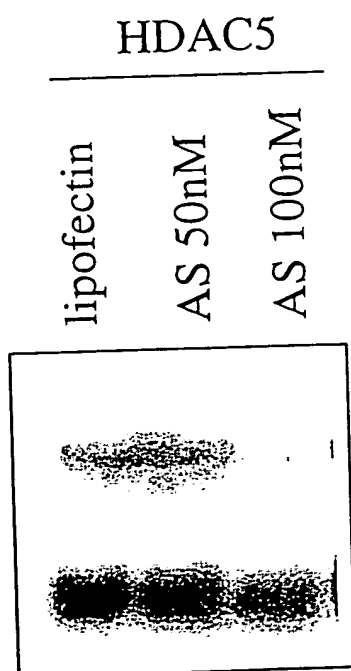


FIGURE 9 H

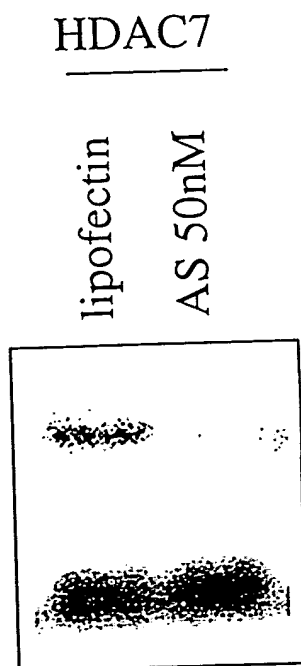


Figure 9I

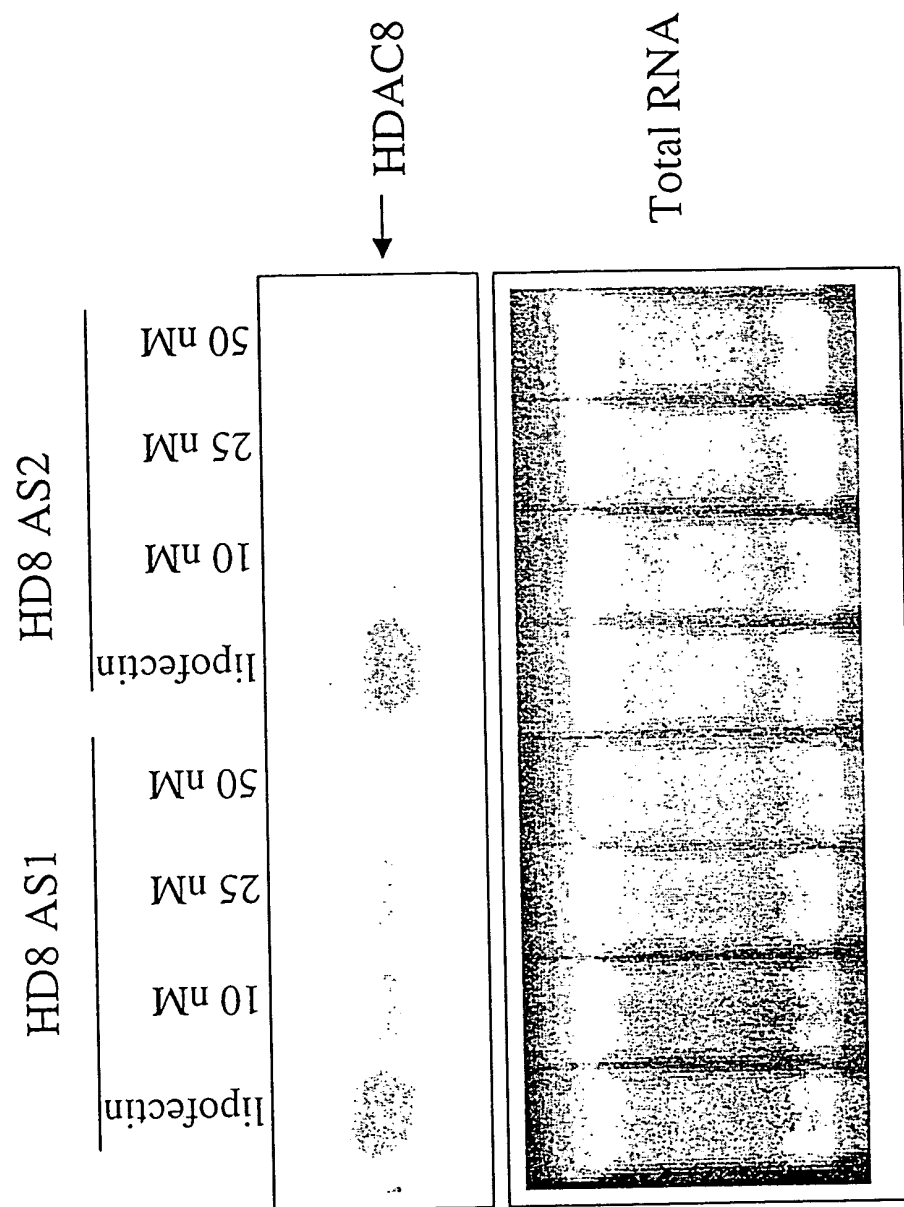
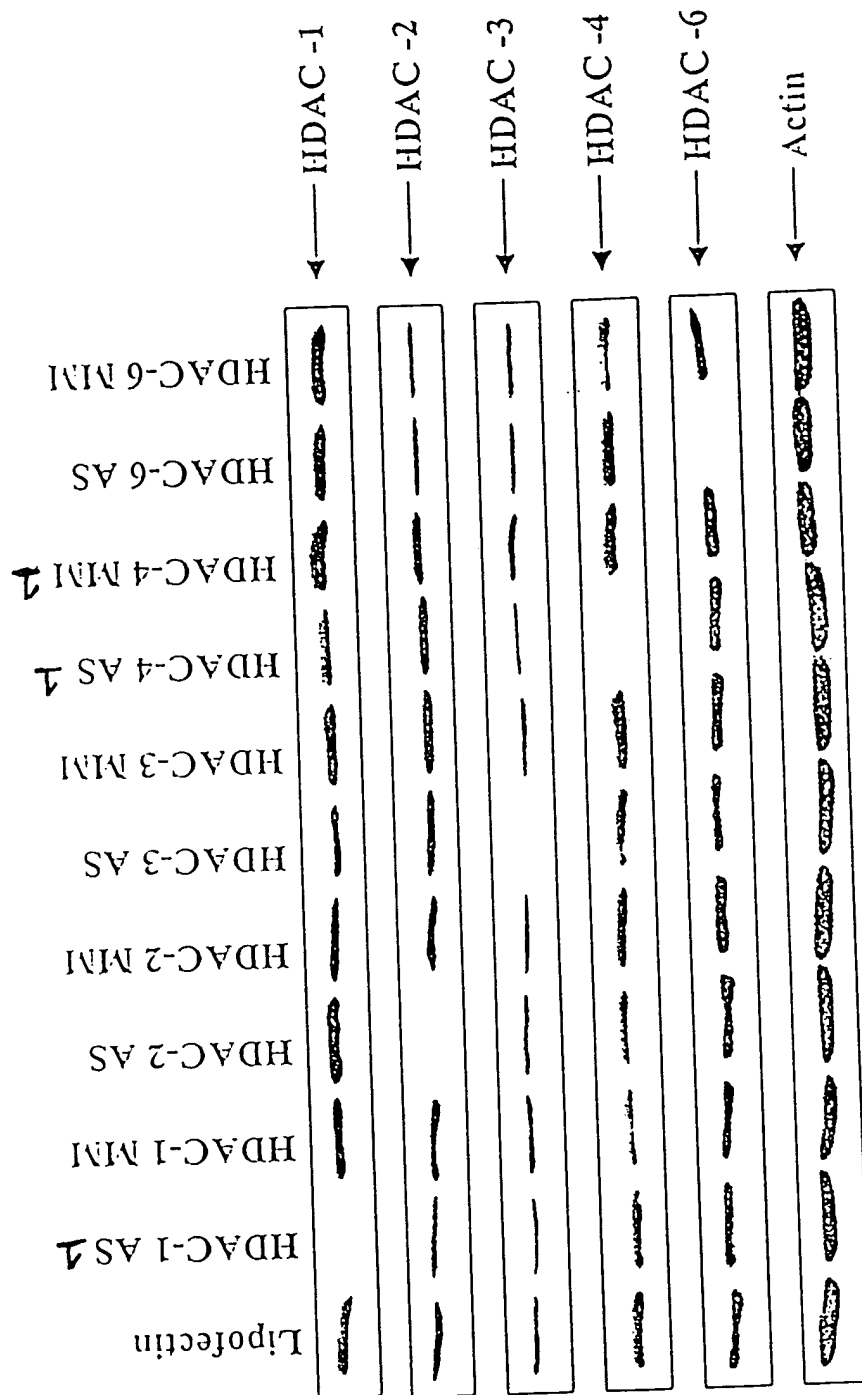
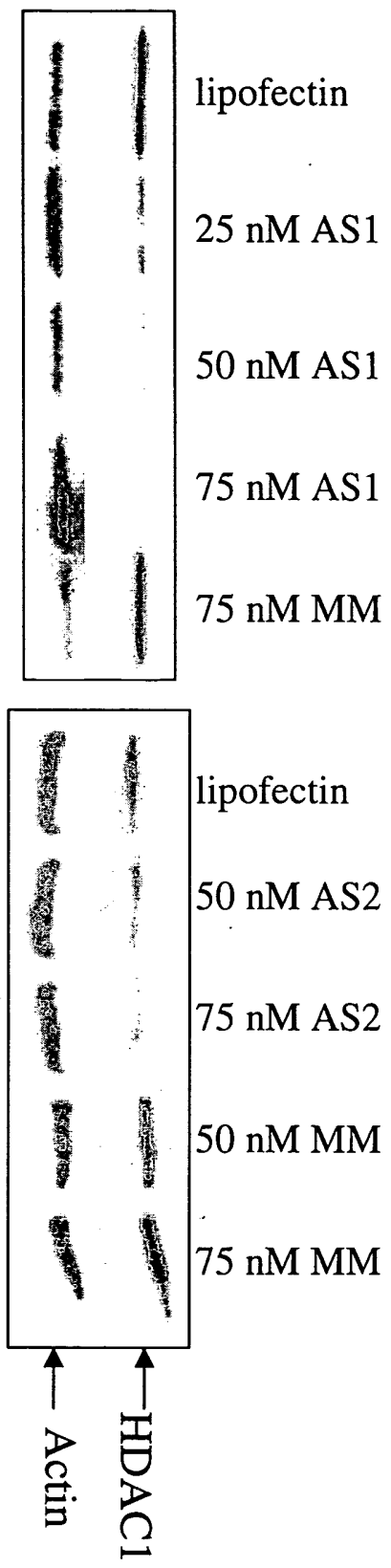


Figure 10 A



AS = Antisense
MM = Mismatch
NS = Non-specific control
3 day treatment
Oligonucleotide conc. = 50nM

Figure 10B



09817913.031501

FIGURE 11

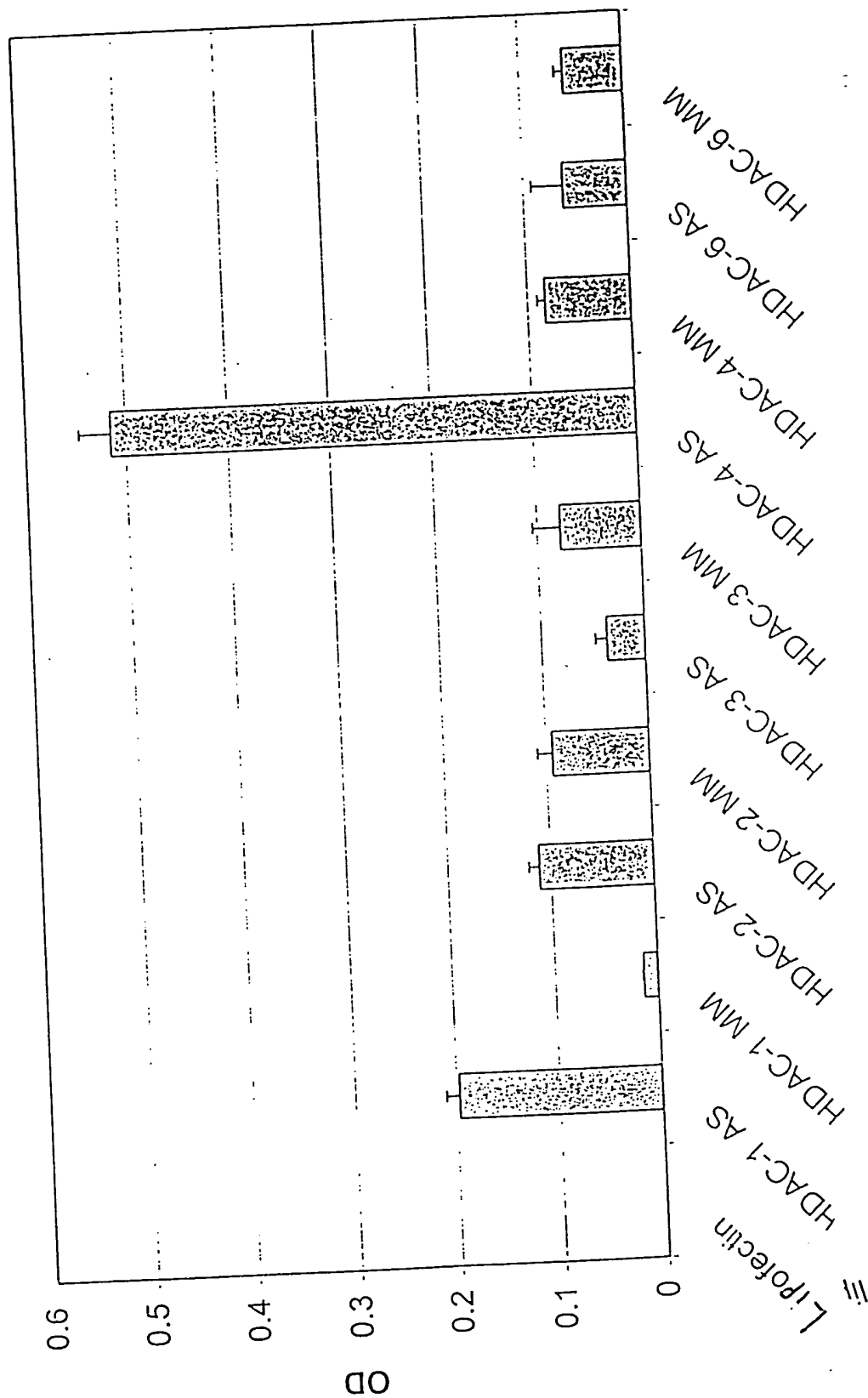


FIGURE 12A

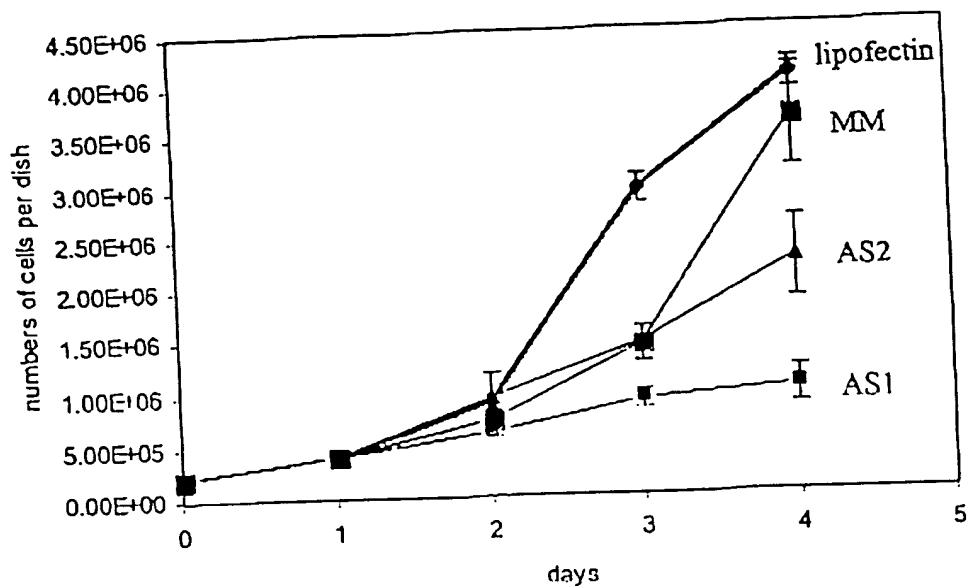
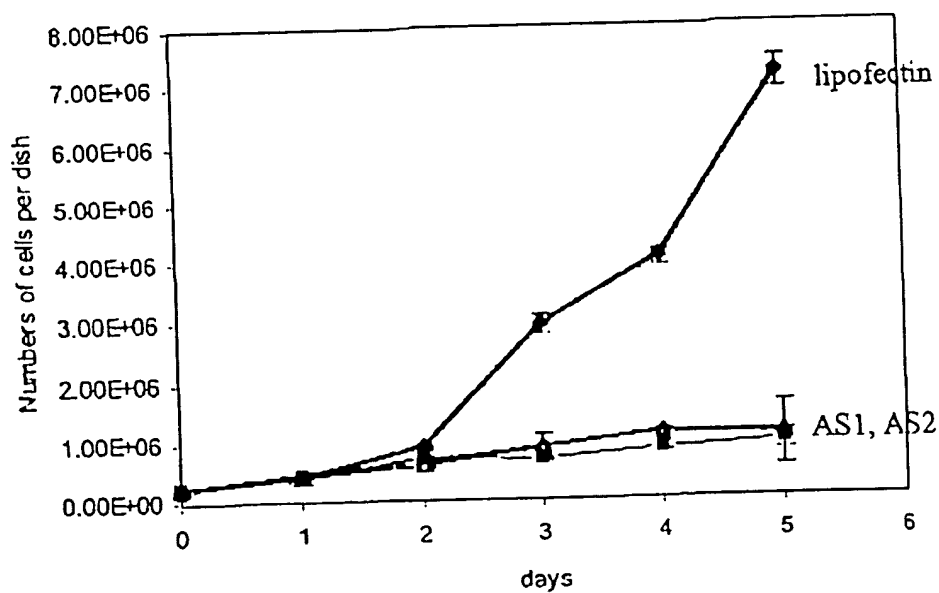


FIGURE 12B



% of Cells with DNA content ($\geq 2N$)

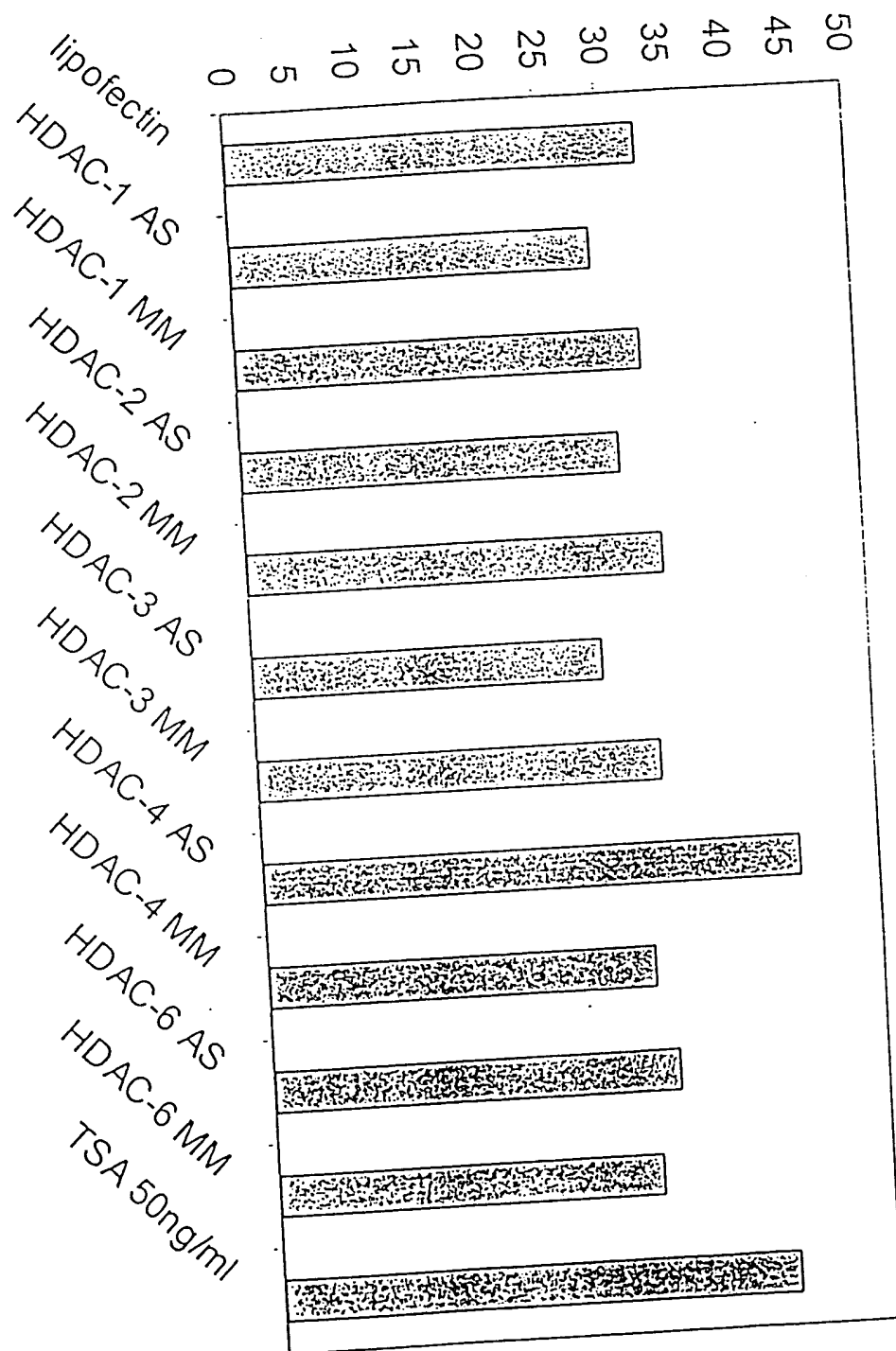


FIGURE 13

09817913.031601

FIGURE 14

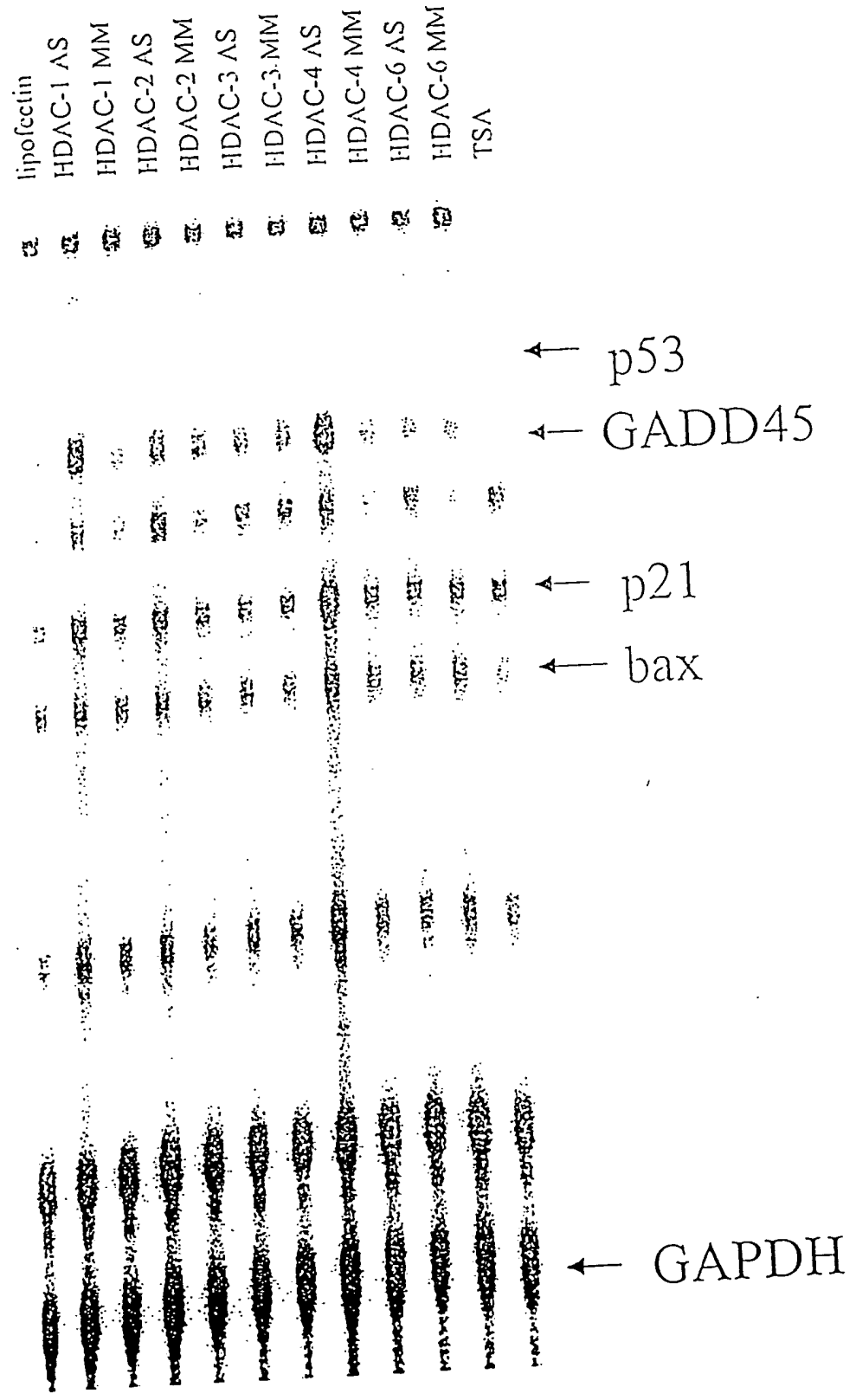


FIGURE 15

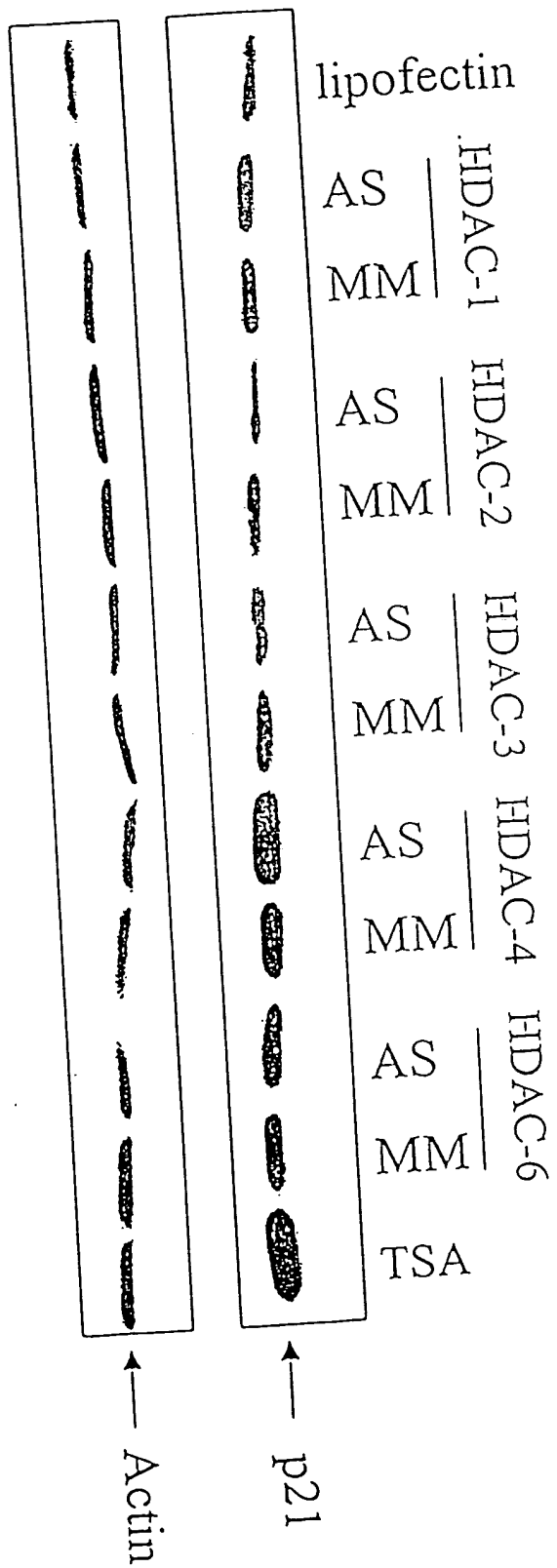


FIGURE 16

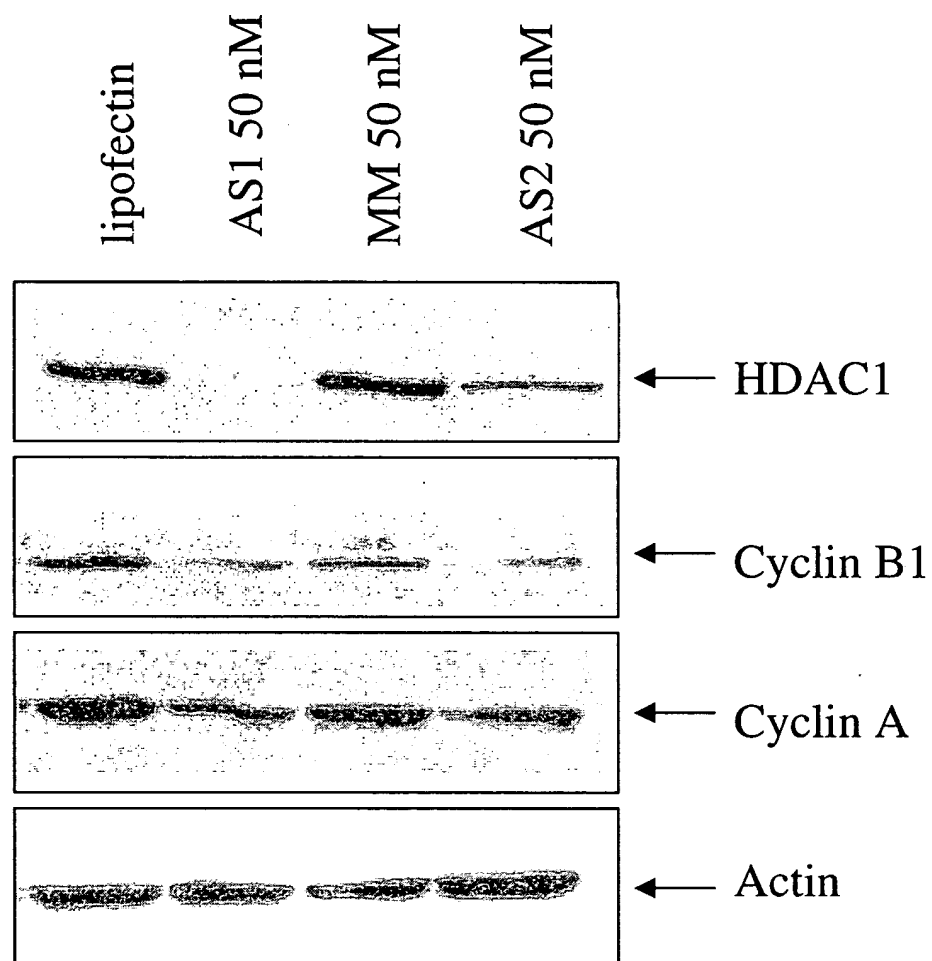


Figure 17

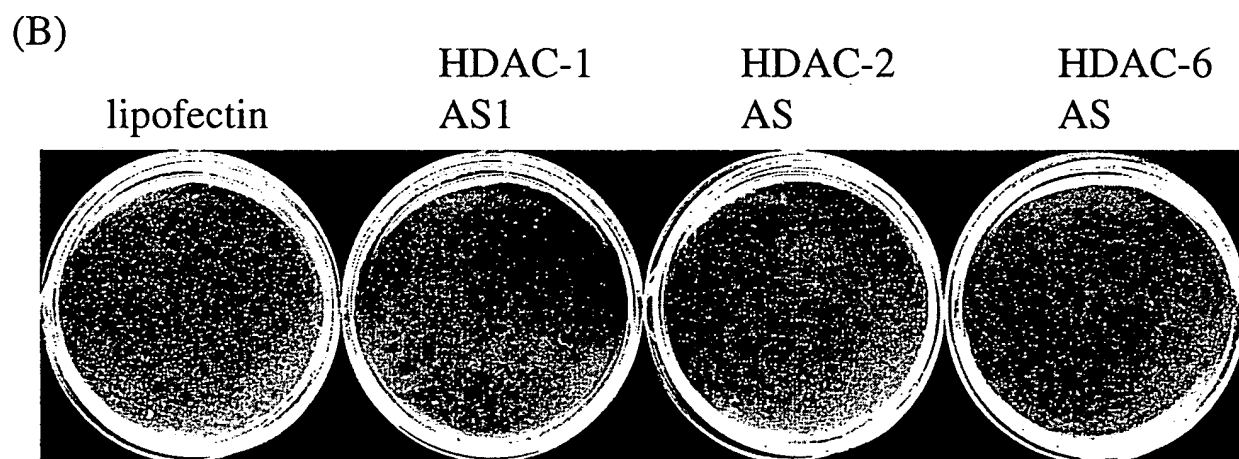
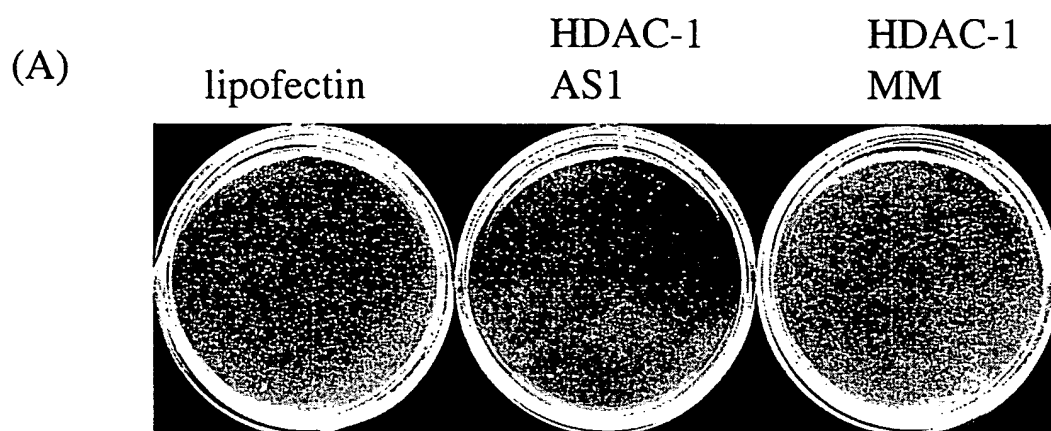
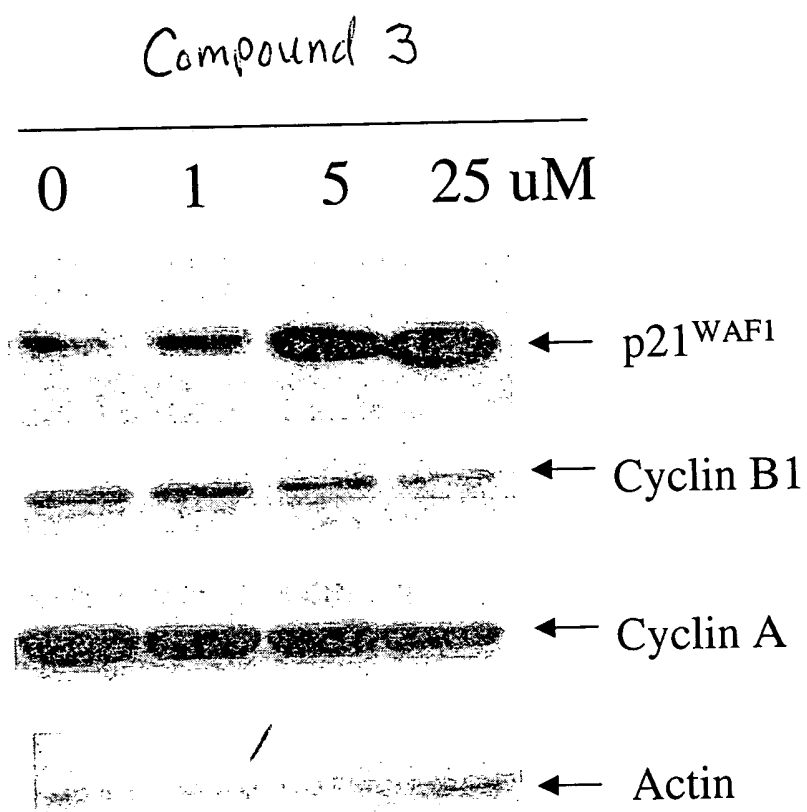


FIGURE 18



09817913-031601